

**PATENT**

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re Application of )  
Calvin F. QUATE et al. ) Prior Group Art Unit: TBD  
Continuation of )  
Application Serial No.: 10/223,719 ) Prior Examiner: Loha Ben  
Filed: Herewith ) Atty. Docket No.: 003848.00129  
For: COMPOSITIONS AND METHODS )  
INVOLVING DIRECT WRITE )  
OPTICAL LITHOGRAPHY )

**INFORMATION DISCLOSURE STATEMENT**

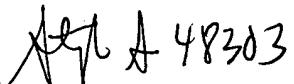
Assistant Commissioner of Patents  
Washington, D.C. 20231

Sir:

Pursuant to 37 C.F.R. § 1.56, the attention of the Patent and Trademark Office is hereby directed to the references listed on the attached PTO-1449. All references were previously cited in the parent cases and therefore, hard copies are not included. It is respectfully requested that the information be expressly considered, and that the reference be made of record therein and appear among the "References Cited" on any patent to issue therefrom.

No fee is believed to be due. If this is incorrect, the Commissioner is authorized to charge any outstanding charges or credit any overpayments to our Deposit Account No.

Respectfully submitted,

  
Pamela Banner Krupka  
Registration No. 33,644

BANNER & WITCOFF, LTD.  
1001 G Street, N.W.  
Washington, D.C. 20001  
(202) 508-9100

Date: July 25, 2003

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INFORMATION DISCLOSURE  
STATEMENT BY APPLICANT

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Sheet

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of

4

Complete if Known

Application Number	TBD
Filing Date	Herewith
First Named Inventor	Calvin F. Quate et al.
Group Art Unit	TBD
Examiner Name	TBD

Attorney Docket Number 003848.000129

## U.S. PATENT DOCUMENTS

Examiner Initials *	Cite No. <sup>1</sup>	Document Number	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number - Kind Code <sup>2</sup> (if known)			
		US- 4,163,150	07-31-1979	Stankewitz	
		US- 4,662,746	05-05-1987	Hornbeck	
		US- 5,143,854	09-01-1992	Pirrung et al.	
		US- 5,318,679	06-07-1994	Nishioka	
		US- 5,384,261	01-24-1995	Winkler et al.	
		US- 5,424,186	06-13-1995	Fodor et al.	
		US- 5,445,934	08-29-1995	Fodor et al.	
		US- 5,510,270	04-23-1996	Fodor et al.	
		US- 5,517,280	05-14-1996	Quate	
		US- 5,539,567	07-23-1996	Lin et al.	
		US- 5,539,568	07-23-1996	Lin et al.	
		US- 5,571,639	11-05-1996	Hubbell et al.	
		US- 5,593,839	01-14-1997	Hubbell et al.	
		US- 5,653,939	08-05-1997	Hollis et al.	
		US- 5,666,190	09-09-1997	Quate et al.	
		US- 5,677,195	10-14-1997	Winkler et al.	
		US- 5,744,305	04-28-1998	Fodor et al.	
		US- 5,768,009	06-16-1998	Little	
		US- 5,883,705	05-16-1999	Minnie et al.	
		US- 5,835,256	11-10-1998	Huibers	

## FOREIGN PATENT DOCUMENTS

Examiner Initials*	Cite No. <sup>1</sup>	Foreign Patent Document	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T <sup>6</sup>
		Country Code <sup>3</sup> - Number <sup>4</sup> - Kind Code <sup>5</sup> (if known)				
		WO 97/26569	07-24-1997	Bloom et al		
		WO 99/41007	08-19-1999	Gao et al.		
		WO 99/42813	08-26-1999	Cerrina et al		
		WO 99/63385	12-09-1999	Garner		
		WO 00/13017	03-09-2000	Stahler et al		
		WO 00/47598	08-17-2000	Seo et al.		

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## **INFORMATION DISCLOSURE STATEMENT BY APPLICANT**

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Sheet 2 of 4

***Complete If Known***

Application Number	TBD
Filing Date	Herewith
First Named Inventor	Calvin F. Quate et al.
Group Art Unit	TBD
Examiner Name	TBD
Attorney Docket Number	003848.000129

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Sheet	3	of	4	Attorney Docket Number
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<b>OTHER PRIOR ART – NON PATENT LITERATURE DOCUMENTS</b>			
Examiner Initials *	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	
T <sup>2</sup>			
		BEECHER, MCGALL, and GOLDBERG: "Chemically Amplified Photolithography for Fabrication of High Density Oligonucleotide Arrays" <i>Affymetrix</i> , pages 597 and 598.	
		BEECHER, MCGALL, and GOLDBERG: "The Application of Photolithographic Techniques for the Fabrication of High Density Oligonucleotide Arrays" <i>Affymetrix</i> , 2 pages.	
		BERTSCH, LORENZ and RENAUD: "Combining Microstereolithography and Thick Resist UV Lithography for 3D Microfabrication" Swiss Federal Institute of Technology (EPFL), pages 18-23.	
		DAVIDSON, MARK, "A Microlens Direct-Write Concept for Lithography" SPIE Vol. 3048, pp. 346-355, 1997.	
		Digital Optical Chemistry, "The Digital Optical Chemistry System", taken from ( <a href="http://pompous.swmed.edu:80/doc">http://pompous.swmed.edu:80/doc</a> ) on August 31, 1999, pages 1-8.	
		European Search Report dated December 1, 2000 corresponding to application no. 99110362.3-1213	
		FINK and CHRISTIANSEN, Electronics Engineers Handbook, 3 <sup>rd</sup> ed., McGraw Hill, (1989), pages 11-96 and 11-99	
		KUCK, BOLLEROTT, DOLESCHAL, GEHNER, GRUNDE, KUNZE, MELCHER, PAUFLER, SELTMANN, and ZIMMER, "New system for Fast submicron laser direct writing," SPIE, Vol. 2440, pages 506-514.	
		MCGALL, LABADIE, BROCK, WALLRAFF, NGUYEN, and HINSBERG, "Light-directed synthesis of high-density oligonucleotide arrays using semiconductor photoresists," Proc. Natl. Acad. Sci., Applied Physical Sciences, Vol. 93, November 1996, pages 13555-13560.	
		MONK, DAVID W. et al, "The Digital Micromirror Device for Projection Display" Microelectronic Engineering 27 (1995) pp. 489-493.	
		PAUFLER, KUCK, SELTMANN, DOLESCHAL, GEHNER, and ZIMMER, "High-throughput optical direct write lithography," Solid State Technology, June 1997, pages 175-182.	

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		PEASE, SOLAS, SULLIVAN, CRONIN, HOLMES, and FODOR: "Light-generated oligonucleotide arrays for rapid DNA sequence analysis" Affymetrix, Proc. Natl. Acad. Sci. USA, vol. 91, May 1994, pages 5022-5026.		
		SELTMANN, DOLESCHAL, GEHNER, KUCK, MELCHER, PAÜFLER, and ZIMMER, "New System for Fast Submicron Optical Direct Writing," Microelectronic Engineering, 30(1996), pages 123-127.		
		Silicon Light Machines, "The Grating Light Valve Technology," taken from ( <a href="http://www.siliconlight.com/framespressbottom.html">www.siliconlight.com/framespressbottom.html</a> ) April 27, 1997, page 1.		
		Silicon Light Machines, "Recent Press Releases, Silicon Light Machines Spearheads Development of Next Generation Display Technology, Company Addresses Need for higher Resolution Displays in Emerging Market Applications," taken from ( <a href="http://www.siliconlight.com/framespressbottom.html">www.siliconlight.com/framespressbottom.html</a> ), April 2, 1997, pages 1-3.		
		SINGH-GASSON, GREEN, YUE, NELSON, BLATTNER, SUSSMAN, and CERRINA: "Maskless fabrication of light-directed oligonucleotide microarrays using a digital micromirror array", Nature Biotechnology, vol. 17, October 1999, pages 974-978.		
		SMITH, Modern Optical Engineering, McGraw Hill, (1990), page 152.		
		WALLRAFF, LABADIE, BROCK, DIPIETRO, NGUYEN, HUYNH, HINSBERG, and MCGALL: "DNA sequencing on a chip" Chemtech, February 1997, pages 22-32.		
		YODER, "The State of the Art in Projection Display: An Introduction to the Digital Light Processing (DLP) Technology," Texas Instruments, taken from ( <a href="http://www.ti.com/dlp/docs/papers/state.html">www.ti.com/dlp/docs/papers/state.html</a> ), April 1997.		

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